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REMARKS

An appeal had been lodged against the rejection of claim 1 based on 35 USC 101 and the rejection of claims 1-24 under 35 USC 102 in view of Lubachevsky et al article titled "Synchronous Relaxation for Parallel Simulations with Applications to Circuit-Switched Networks." In view of the appeal brief filed November 14, 2005, prosecution was reopened, with the previous rejections apparently rescinded, and the claims rejected under 35 USC 112, second paragraph (claims 21-24), and under 35 USC 102 (of claims 1-24) in view a **different** reference.

Claims 22-24 were rejected under 35 USC 112 because independent claim 22 defined a "storage element" and the Examiner asserted an indefiniteness since a storage element "could be a plastic container for example." Actually, the Examiner offered the observation that a module – which is an element that is included in the defined storage element – is a portion of a program. In light of this, it would not make sense to interpret a storage element that comprises a portion of a program as a "plastic container." Moreover, it can easily be argued that applicants are not averse to having the Examiner give the term whatever broad interpretation the Examiner may think of. Nevertheless, in order to advance prosecution, claim 22 is amended herein to specify that the storage element is one that is adapted to interact with a processing element.

Claims 1-24 were rejected under 35 USC 102(b) as being anticipated by Lubachevsky (one of the inventors herein) "Almost Linear Speed-Up Distributed Event Simulation". The Examiner describes this reference as one where Lubshevsky discloses a new distributed simulation algorithm that "explores the topology of the simulated system using precomputed minimum propagation delays between subsystems," and asserts, inter alia, that a PE simulates events in blocks of M edges events. In support of this assertion the Examiner refers to "Office equivocates bound and edge; pg. 188, left column, last paragraph."

Applicants are at a loss, not understanding the phrase. A call was made to the Examiner, and the Examiner's courteous and cooperative discussion of this point is greatly appreciated. As now understood, the Examiner meant to say that the Office, meaning the Examiner, equates the terms "bound" and "edge." As for the citation of the last paragraph on page 188, left column, in the telephone interview the Examiner pointed

to the sentence "The algorithm uses the minimum propagation delays in tandem with the *bounded lag restriction.*" Applicants respectfully disagree with the Examiner's position.

First, an edge event is first and foremost an event. The reference, in contradistinction, refers to bounded lag, which is a time notion. Actually, the paragraph that follows the one cited by the Examiner teaches that one PE may be assigned to several nodes, and with the hindsight of applicant's present application one can realize that when a number of nodes are assigned to a single PE, it is possible to have a system where edge events are processed in a PE. However, this notion is not described or suggested in the last paragraph of the left column of page 188, or in the first paragraph of the right column of page 188, or in any other passage of the reference.

Second, an edge event is a particular type of event, and claim 1 explicitly defines it as an event "whose simulation in a processing element is directly affected by information originating in another processing element. A bounded lag notion has nothing to do with events, and certainly nothing to do with edge events.

Viewed from the standpoint of what the reference does teach, it is noted that the algorithm described in the reference (Fig. 3.1) teaches the following:

Algorithm steps	**Explanation**
1. While $floor < end\_time$ do {	Perform the algorithm as long as the floor time is less than the end time
2. compute estimate $\alpha(i)$ of the earliest time when the history at node i can be affected by the other nodes;	A computation of a time (from current time) to the earliest time when the node can be affected
3. synchronize;	Synchronize all of the PE's
4. while the minimum of event times at node i, T_i, satisfy $T_i \le floor + B$ and $T_i < \alpha(i)$ do {	Perform steps 5 and 6 for events whose times are less than the current floor plus some constant B, and also less than the computed time $\alpha(i)$; i.e., bounded by the lower of $floor$+B and $\alpha(i)$.
5. process event e with locally minimal time, T_i;	Of the group of events that step 4 encompasses, process earlier events before the later events.
6. delete the processed events from Π_i and computer a new T_i.}	Delete the processed events from the pool of events assigned to node i, and with each processed even advance the time, T_i.

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7. synchronize	
8. $floor := \min_{1 \le i \le N} T_i$	Establish a new floor that corresponds to the lowest floor from among the N PEs.
9. synchronize;}	

A review of the above, particularly when aided by the explanation in the right column, leads to the following conclusions:

- At no step of the algorithm is there any notion of *edge events*.
- Looking at claim 1 more broadly, the simulations are performed by taking "chunks," processing them, and then taking subsequent "chunks." The "chunks" of claim 1 are measured by a number of **events**, and more particularly, by the number of **edge events**. The simulations in the reference are also performed by taking "chunks" but, in contradistinction to claim 1, the chunks are chunks of **time** (the lower of *floor*+B and $\alpha(i)$).
- Claim 1 specifies not only that edge events form the criterion for the chucks that are taken for processing, but specifies a particular number of edge events. Since the reference does not take chunks based on number of events it is not surprising that there is no teaching of any number at all, much less a number that correspond to the value of M as defined in claim 1.

It is respectfully submitted whether viewed from the standpoint of the traversal of the Examiner's equivalence assertion, or from the analysis of that which is taught by the reference, the conclusion must be reached that claim 1 is not anticipated by the cited reference and, correspondingly, that claims 2-20 are not anticipated by the cited reference.

Claim 21 is an apparatus claim, but it includes an element that imposes a limitation not unlike the step (c) limitation of claim 1 discussed above. Hence, the arguments presented relative to claim 1 apply with equal vigor to claim 21, and applicants respectfully submit that claim 21, and the claims that depend on claim 21, are not anticipated by the cited reference.

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In light of the above amendments and remarks, applicants respectfully submit that all of the Examiner's rejections have been overcome. Reconsideration and allowance are respectfully solicited.

Respectfully,
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